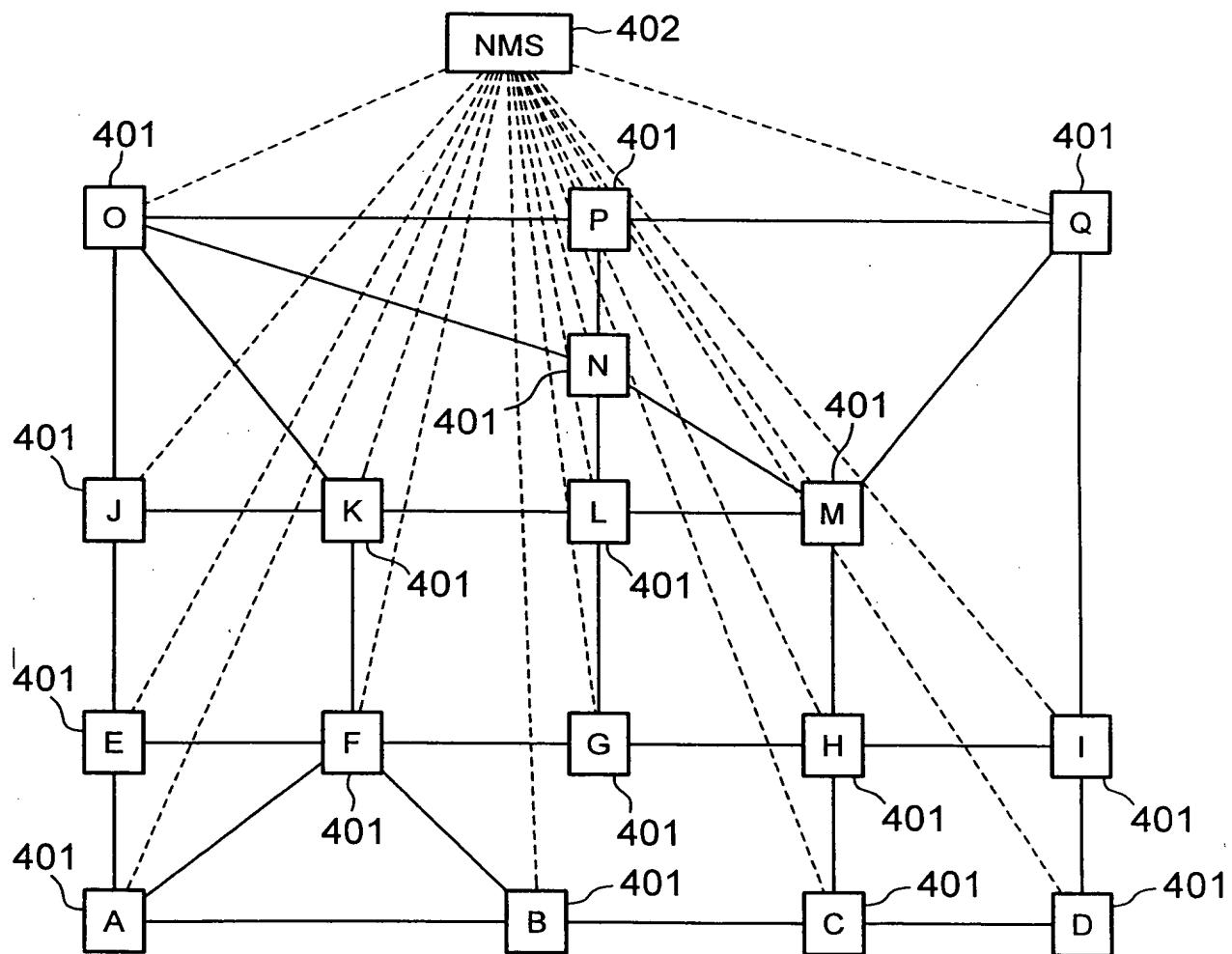




FIG. 1





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FIG. 2

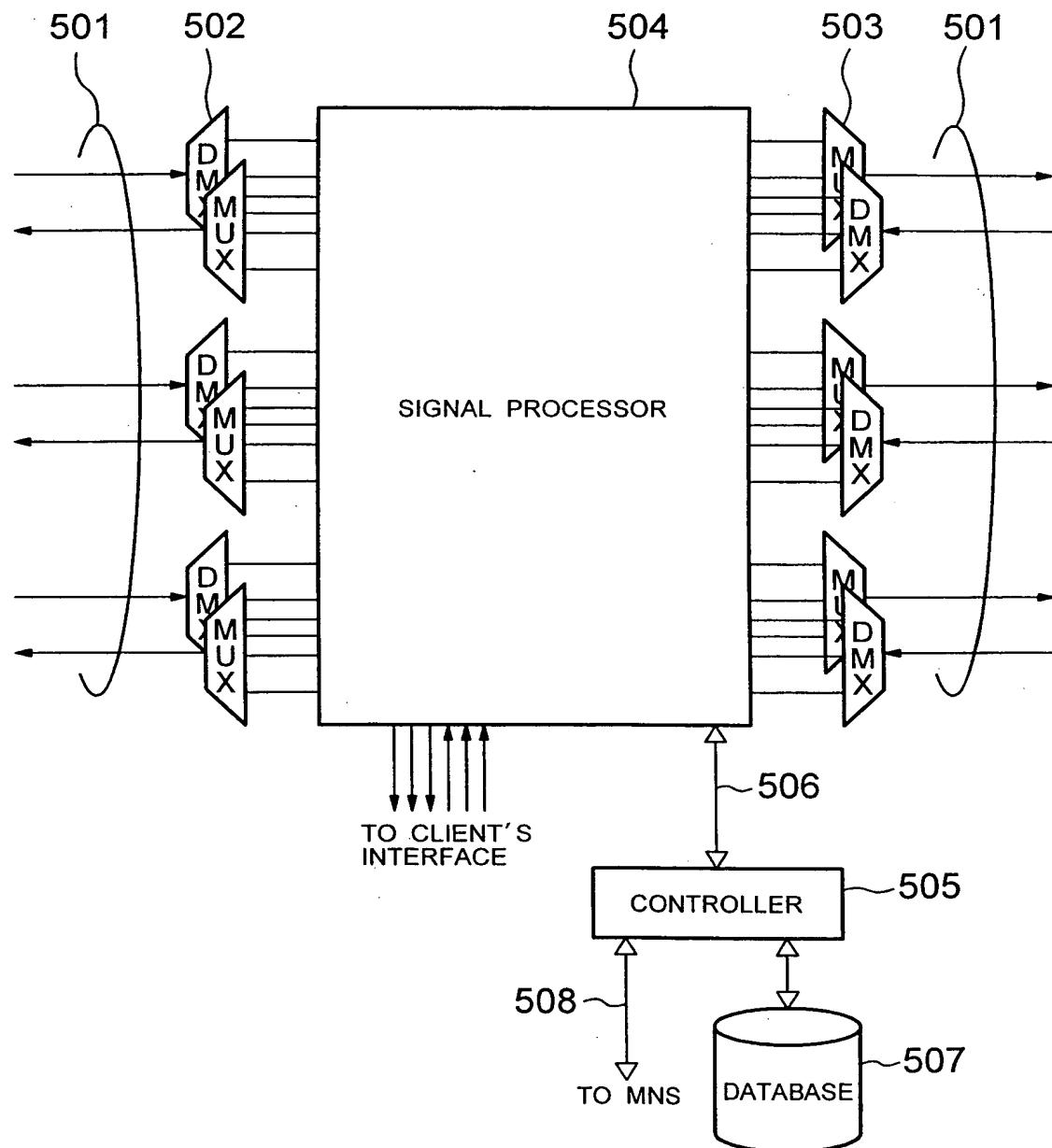


FIG. 3A

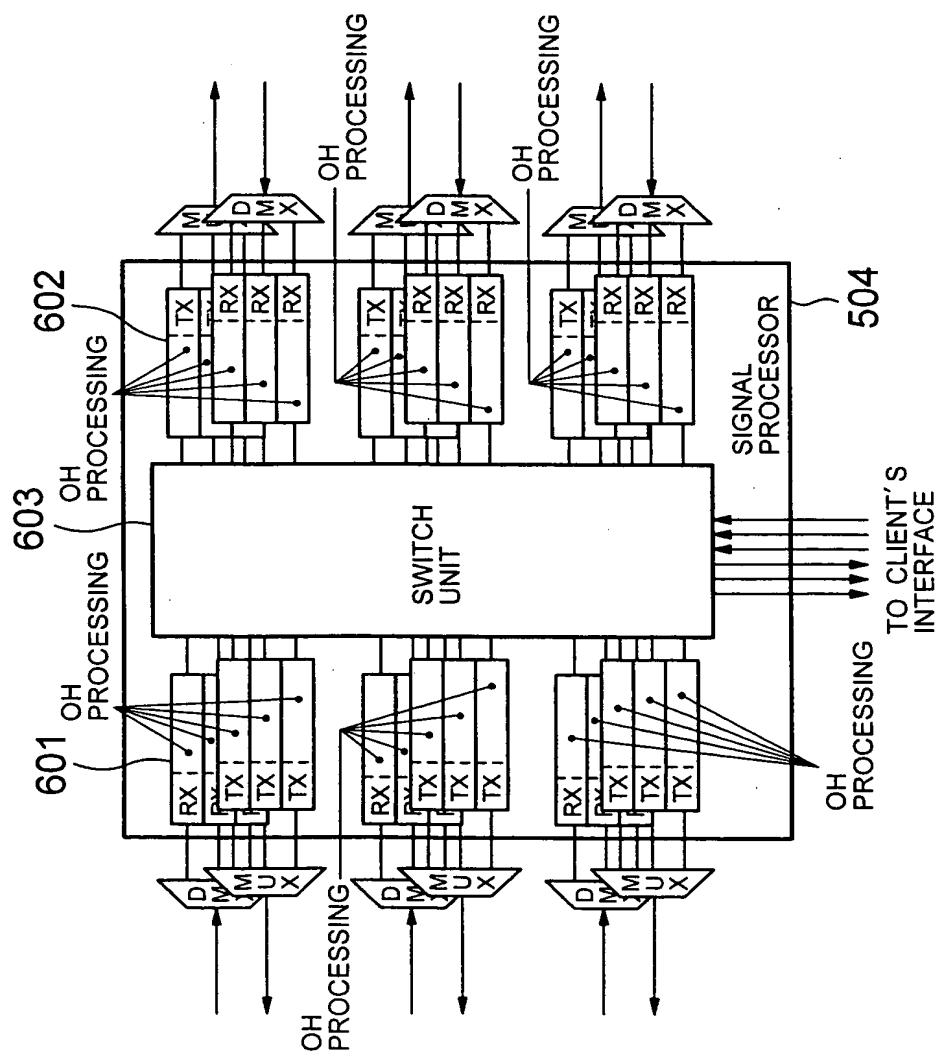
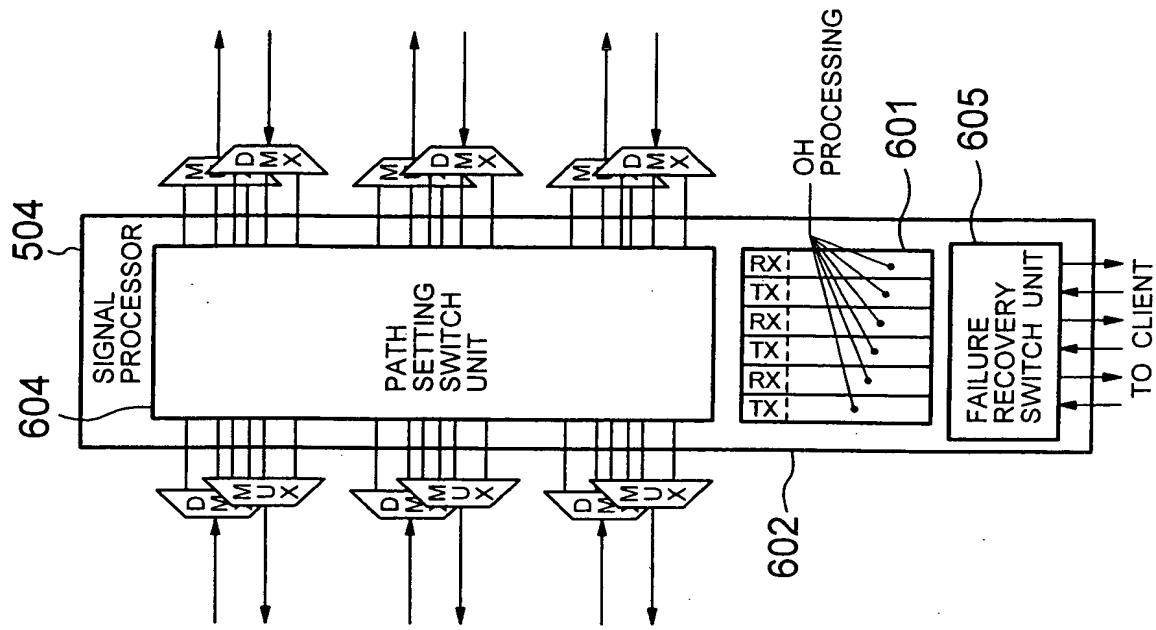


FIG. 3B



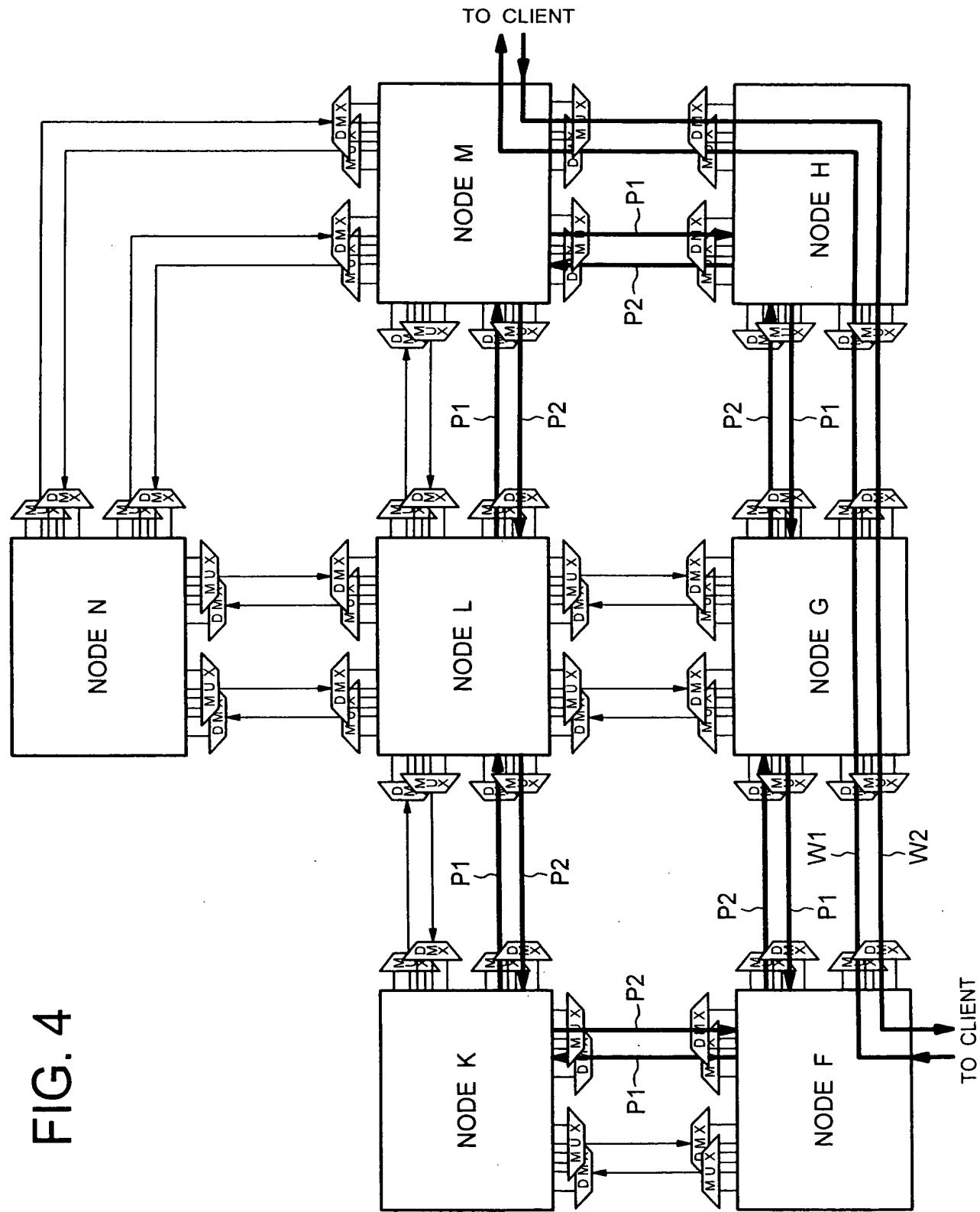


FIG. 4



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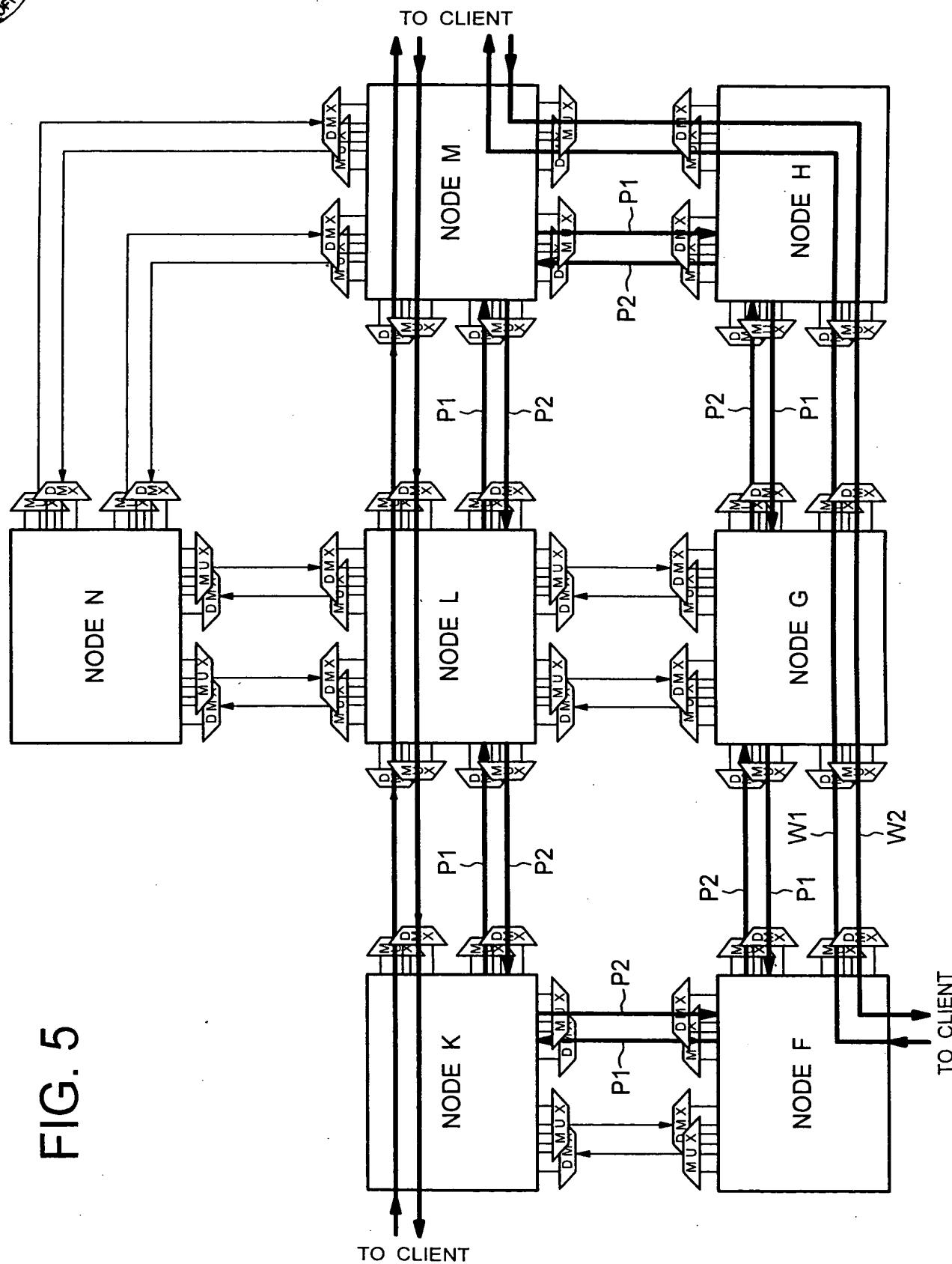


FIG. 5

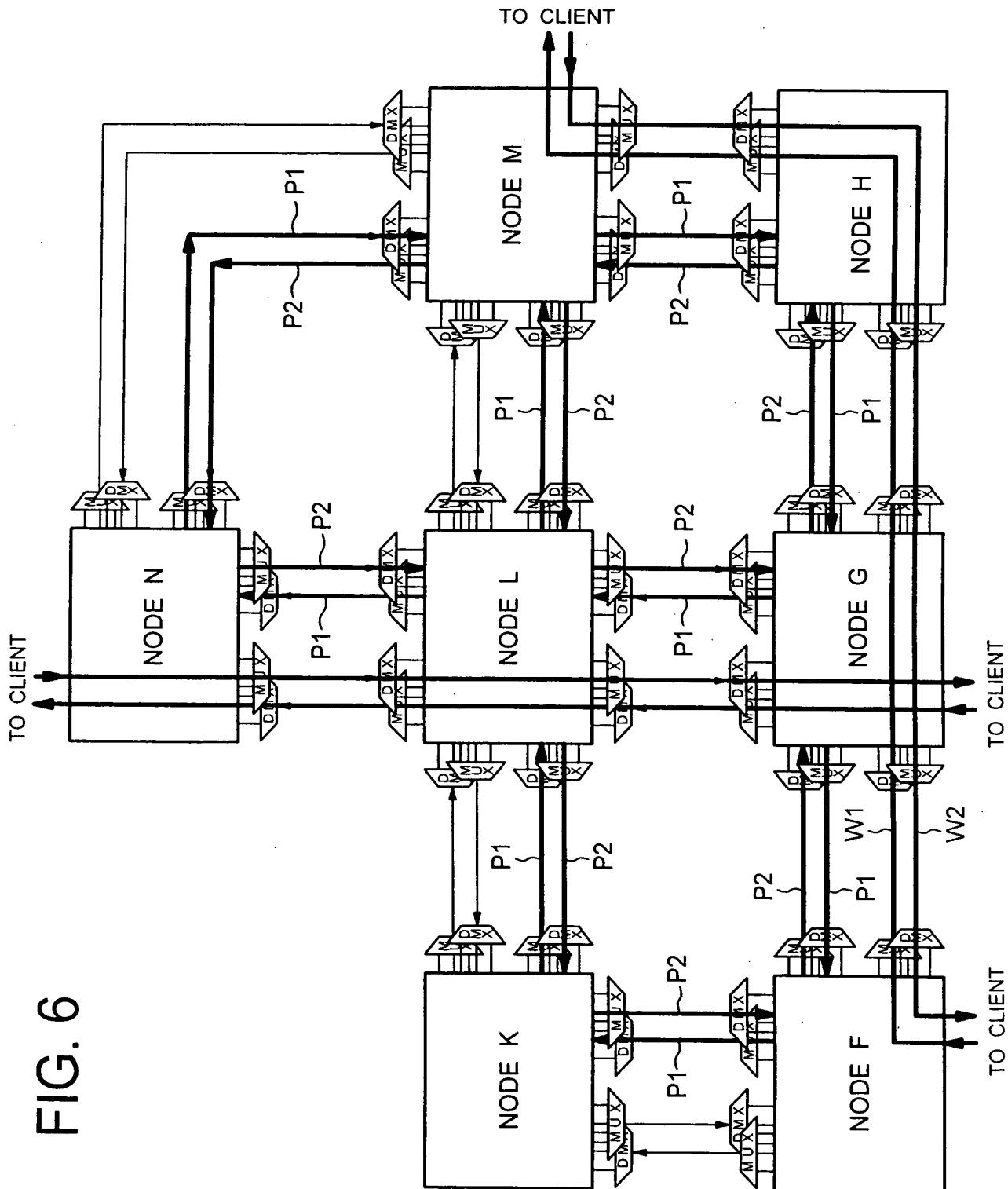


FIG. 6



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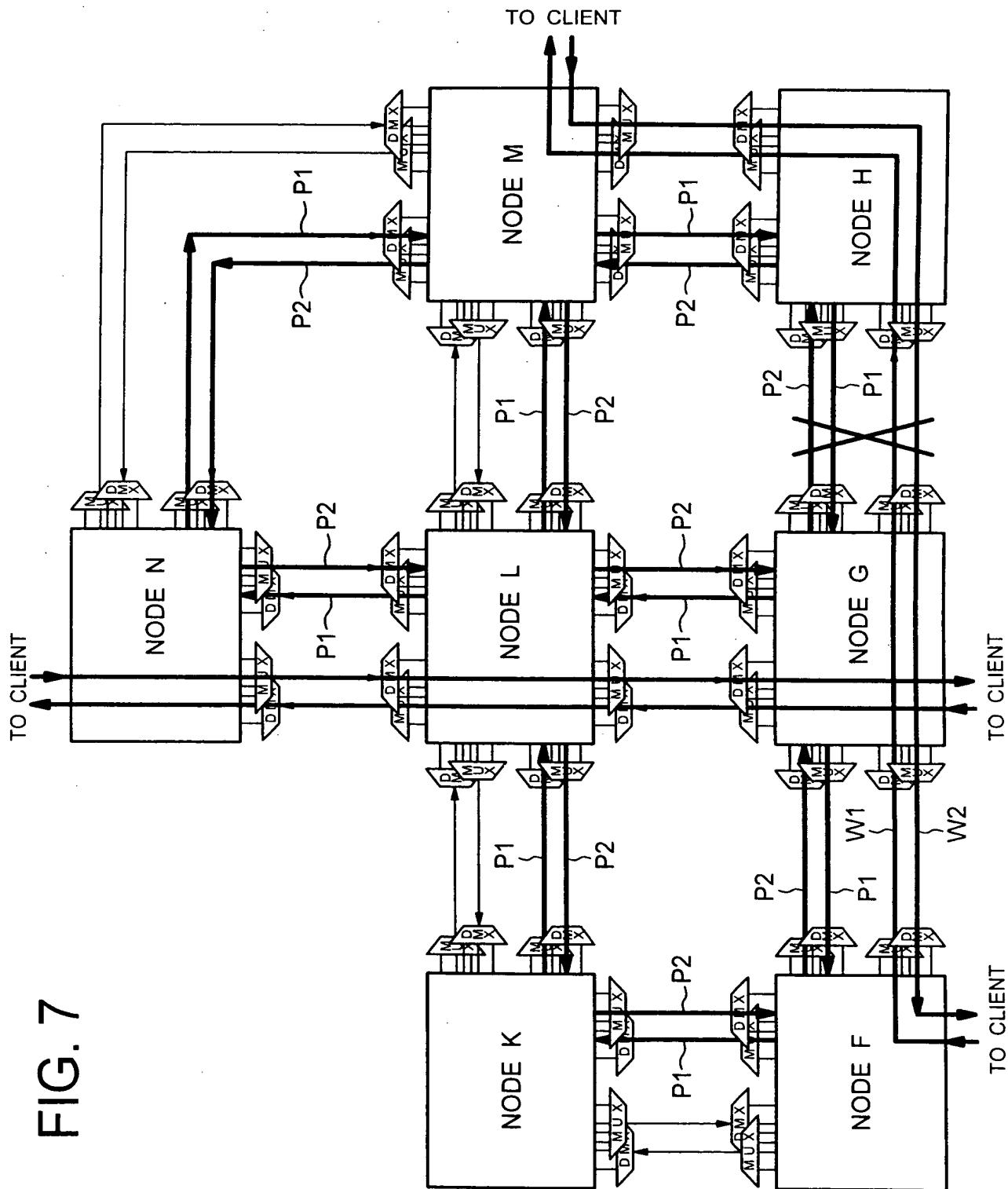
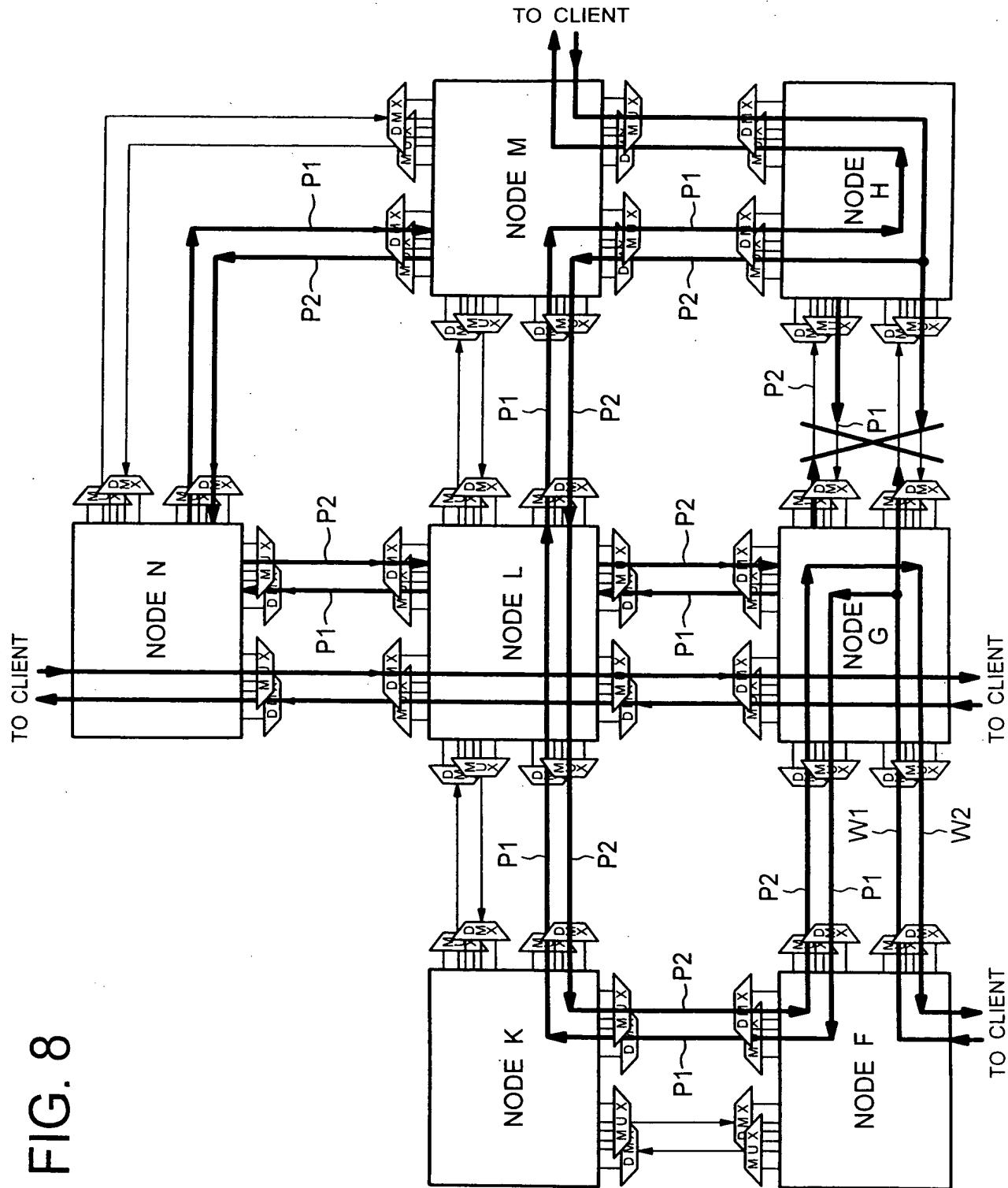


FIG. 7



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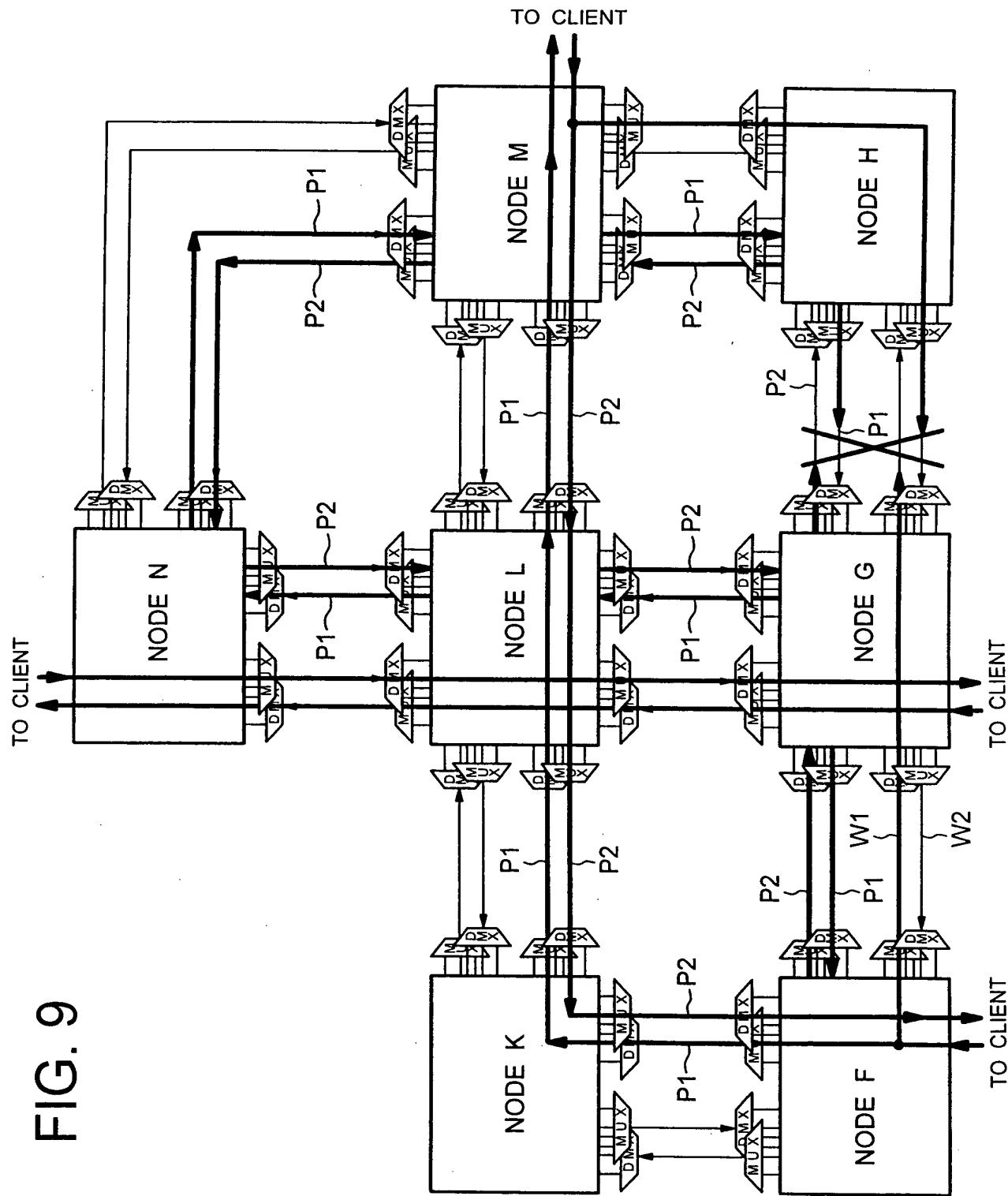


FIG. 9



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FIG. 10

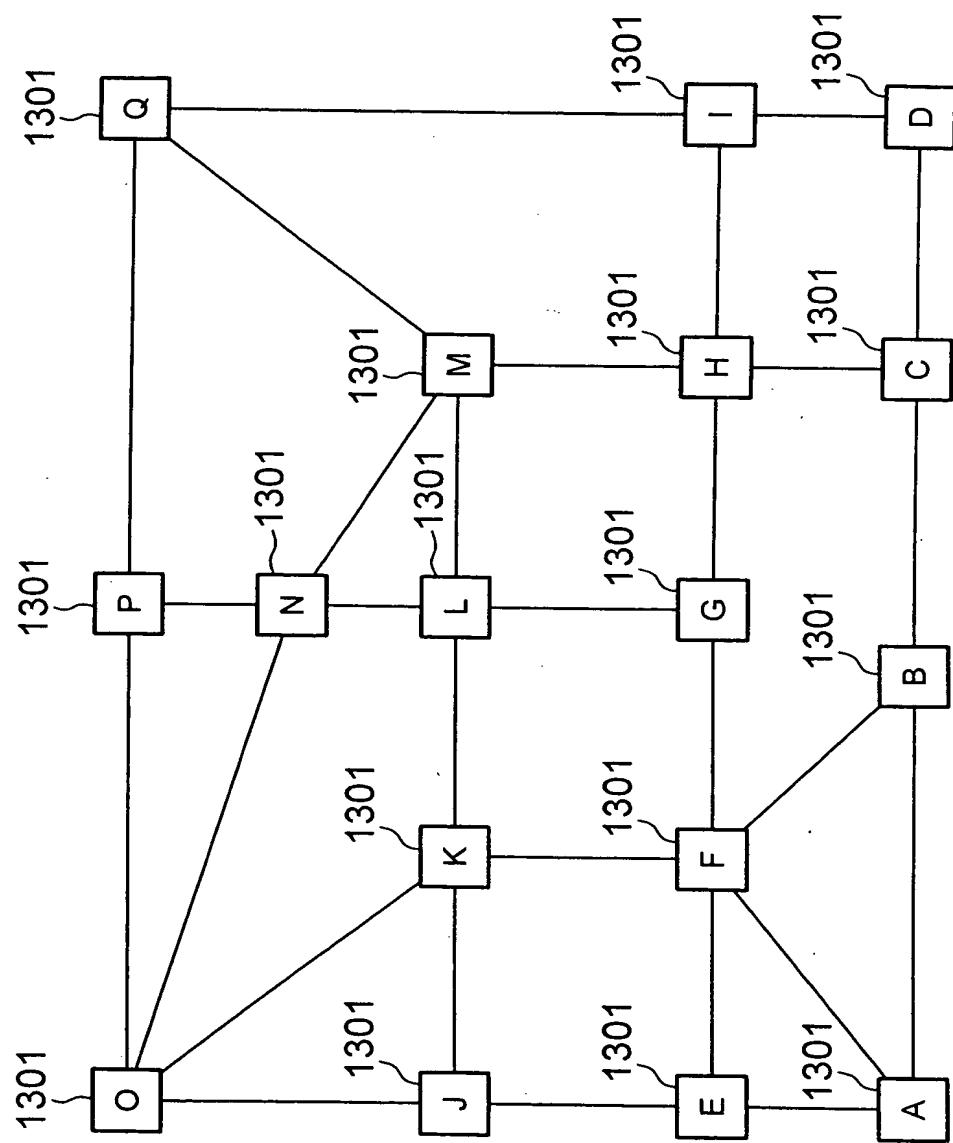




FIG. 11

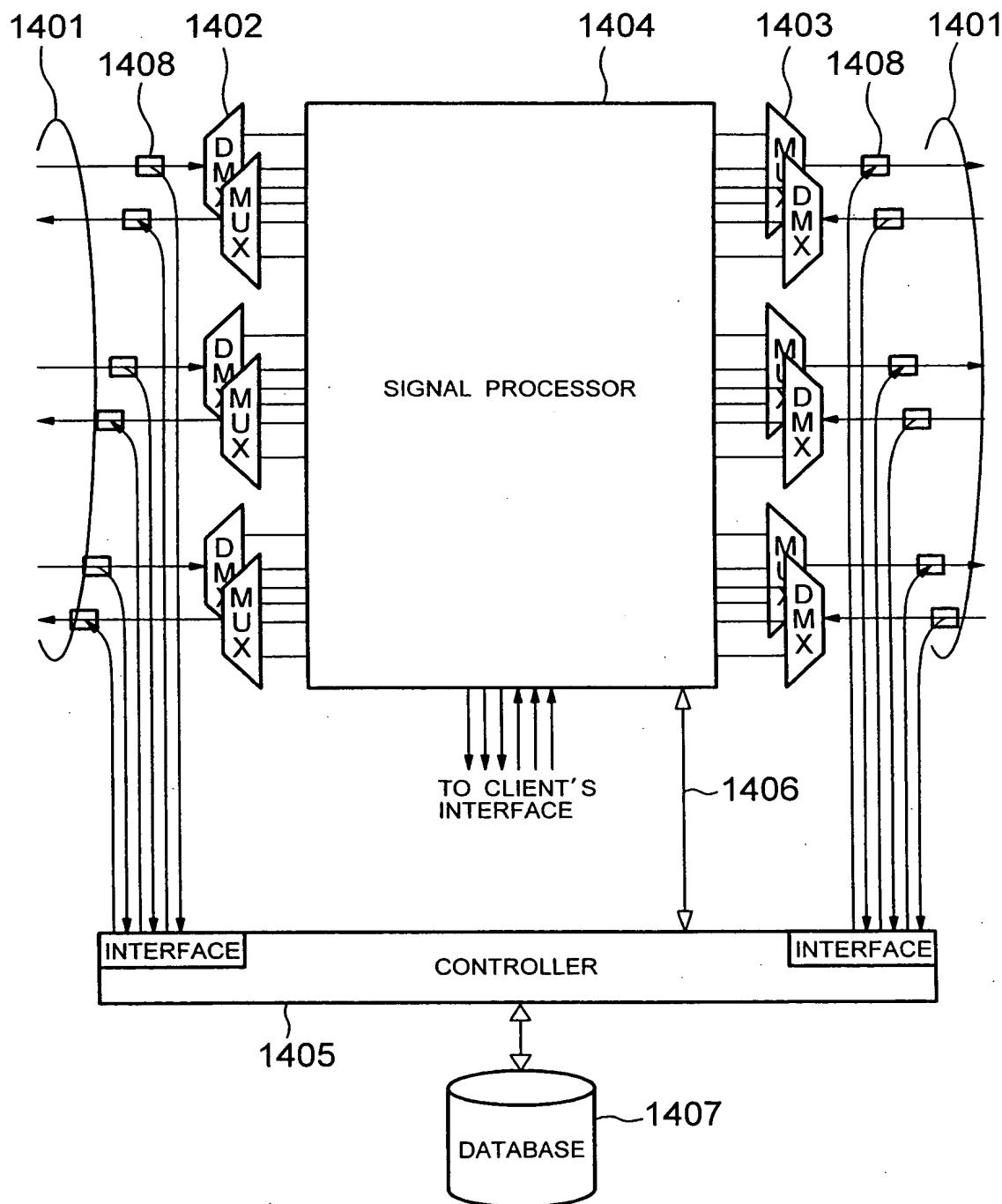


FIG. 12

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| RING ID | RING LINK INFORMATION | W1 | | W2 | | P1 | | P2 | | LOCAL NODE ID |
|---------|-----------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|
| | | INPUT PORT | OUTPUT PORT | |
| 1 | F | 29 | 26 | | | 32 | 41 | 38 | 35 | 0 |
| | G | 8 | 29 | 26 | 11 | 32 | 5 | 2 | 35 | 1 |
| | H | 8 | 41 | 38 | 11 | 44 | 5 | 2 | 47 | 2 |
| | M | 20 | | | 23 | 8 | 17 | 14 | 11 | 3 |
| | L | | | | | 8 | 29 | 26 | 11 | 4 |
| | K | | | | | 20 | 29 | 26 | 23 | 5 |



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FIG. 13

| RING ID | RING LINK INFORMATION | W1 | | W2 | | P1 | | P2 | | LOCAL NODE ID |
|---------|-----------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|
| | | INPUT PORT | OUTPUT PORT | |
| 1 | F | 29 | 26 | | | 32 | 41 | 38 | 35 | 0 |
| | G | 8 | 29 | 26 | 11 | 32 | 5 | 2 | 35 | 1 |
| | H | 8 | 41 | 38 | 11 | 44 | 5 | 2 | 47 | 2 |
| | M | 20 | | | 23 | 8 | 17 | 14 | 11 | 3 |
| | L | | | | | 8 | 29 | 26 | 11 | 4 |
| | K | | | | | 20 | 29 | 26 | 23 | 5 |
| 2 | F | | | | | 32 | 41 | 38 | 35 | 0 |
| | G | | | | | 32 | 5 | 2 | 35 | 1 |
| | H | | | | | 44 | 5 | 2 | 47 | 2 |
| | M | | 5 | 2 | | 8 | 17 | 14 | 11 | 3 |
| | L | 32 | 5 | 2 | 35 | 8 | 29 | 26 | 11 | 4 |
| | K | 32 | | | 35 | 20 | 29 | 26 | 23 | 5 |



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FIG. 14

| RING ID | RING LINK INFORMATION | W1 | | W2 | | P1 | | P2 | | LOCAL NODE ID |
|---------|-----------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|
| | | INPUT PORT | OUTPUT PORT | |
| 1 | F | 29 | 26 | | 32 | 41 | 38 | 35 | 0 | |
| | G | 8 | 29 | 26 | 11 | 32 | 5 | 2 | 35 | 1 |
| | H | 8 | 41 | 38 | 11 | 44 | 5 | 2 | 47 | 2 |
| | M | 20 | 5 | 2 | 23 | 8 | 17 | 14 | 11 | 3 |
| | L | 32 | 5 | 2 | 35 | 8 | 29 | 26 | 11 | 4 |
| | K | 32 | | 35 | 20 | 29 | 26 | 23 | 5 | |
| 2 | G | 44 | | 47 | 32 | 41 | 38 | 35 | 6 | |
| | H | | | | 32 | 5 | 2 | 47 | 7 | |
| | M | | | | 44 | 17 | 14 | 47 | 8 | |
| | N | | 17 | 14 | | 20 | 29 | 26 | 23 | 9 |
| | L | 44 | 17 | 14 | 47 | 20 | 41 | 38 | 23 | 10 |



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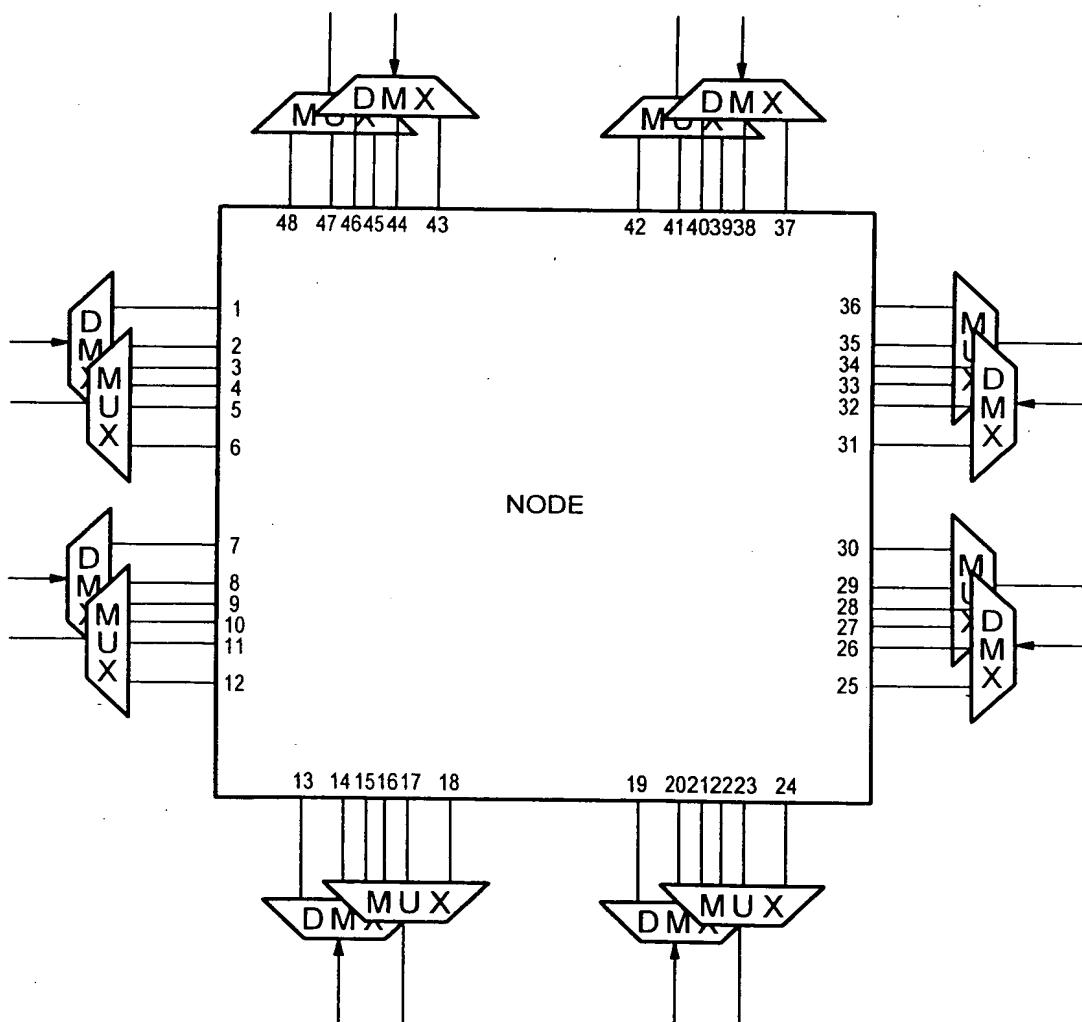
FIG. 15

| RING ID | RING LINK INFORMATION | W1 | | W2 | | P1 | | P2 | | LOCAL NODE ID |
|---------|-----------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|
| | | INPUT PORT | OUTPUT PORT | |
| 1 | F | 29 | 26 | | | 32 | 41 | 38 | 35 | 0 |
| | G | 8 | 29 | 26 | 11 | 32 | 5 | 2 | 35 | 1 |
| | H | 8 | 41 | 38 | 11 | 44 | 5 | 2 | 47 | 2 |
| | M | 20 | 5 | 2 | 23 | 8 | 17 | 14 | 11 | 3 |
| | L | 32 | 5 | 2 | 35 | 8 | 29 | 26 | 11 | 4 |
| | K | 32 | | 35 | 20 | 29 | 26 | 23 | 5 | |
| 2 | N | | | | 44 | 5 | 2 | 47 | 0 | |
| | O | 32 | | 35 | 20 | 29 | 26 | 23 | 1 | |
| | P | | 5 | 2 | 8 | 17 | 14 | 11 | 2 | |



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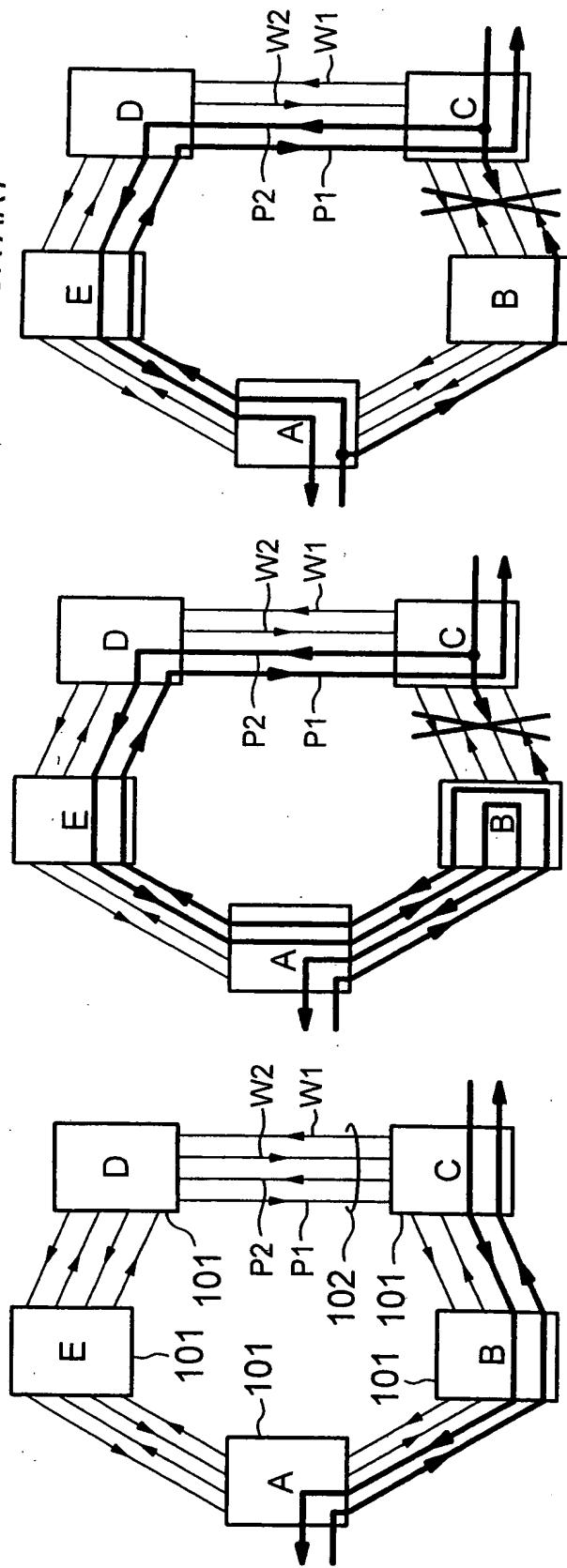
FIG. 16





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FIG. 17A
FIG. 17B
FIG. 17C

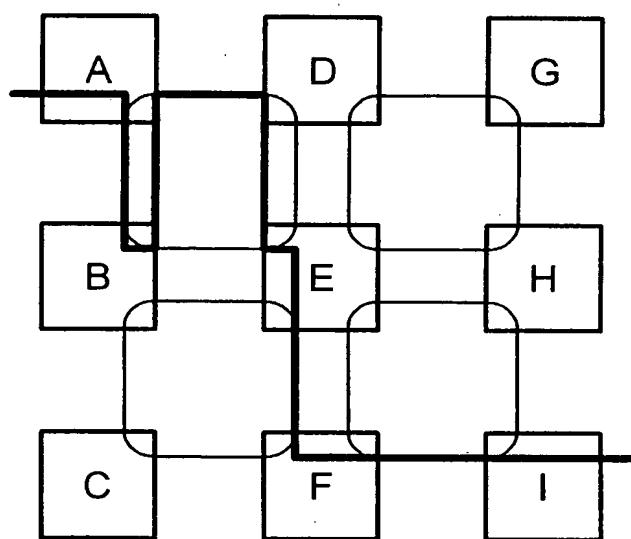


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FIG. 18

PRIOR ART



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FIG. 19

PRIOR ART

